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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/385,574	08/30/1999	TAKAO OGAWA	0186-13	9361

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EXAMINER

NGUYEN, KIMBERLY T

ART UNIT	PAPER NUMBER
1774	12

DATE MAILED: 12/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/385,574	OGAWA ET AL.
	Examiner Kimberly T. Nguyen	Art Unit 1774

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 October 2002.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.
- 4) Claim(s) 1,2 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2 and 4-7 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Objection*

**Claim 6** is objected to because of the following informalities: the phrase “substrate comprises a plastic film selected from a polyethylene terephthalate film, a polyethylene naphthalate film, and an aramid film” is improper Markush claim. This claim language makes it unclear whether the substrate comprises only one of the three or all three listed. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 6** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 is not clear because it shows that the substrate comprises a plastic film “being kneaded with a carbon black” while claim 1, from which claim 6 depends upon, shows “a substrate *consisting of* a plastic film.” For purposes of examination, the substrate consists only of plastic and does not contain any carbon black.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-4 and 6-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsubara, U.S. Pat. No. 5,202,715 in view of Takahashi et al., U.S. Pat. No. 6,001,465.

Matsubara shows a plate member used in light shielding blades comprising at least one reinforced-resin intermediate layer composed of a resin matrix with uni-directionally oriented carbon fibers (substrate and light-shield coatings) and at least one reinforced-resin surface layer on both sides of the intermediate layers including carbon fibers uni-directionally (parallel) arranged in an orthogonal direction (reinforcement member) to that of the carbon fibers in the intermediate layers (column 1, lines 20-30). Matsubara shows the intermediate and surface layers are composed of a thermosetting resin (column 3, lines 25-26 and lines 44-47). Matsubara shows that carbon black may be selectively added to either the prepreg sheets of the surface layers or only to the prepreg sheet(s) of the intermediate layer(s) (column 4, lines 1-5). For example, with three intermediate layers, one being the substrate and the two other intermediate layers flanking the intermediate-substrate layer, carbon black may be selectively added to the two other intermediate layers (light shield coatings) and not the intermediate-substrate layer to yield an optical density of the intermediate-substrate of zero. Further, a black lubricant coating may cover the laminate structure to improve light-shielding and lubrication (column 4, lines 6-12).

Matsubara shows that 10 weight % of carbon black is used in the intermediate layers (column 4, lines 6063 and column 6, lines 12-16). However, Matsubara does not show that the two intermediate layers (light shield coatings) contain 20-40% by weight of carbon black as in instant claim 7. However, such a range is a property which can be easily determined by one of ordinary skill in the art. With regard to the limitation of the range of carbon black concentration,

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absent a showing of unexpected results, it is obvious to modify the conditions of a composition because they are merely the result of routine experimentation. The experimental modification of prior art in order to optimize operation conditions (e.g. range) fails to render claims patentable in the absence of unexpected results. All of the aforementioned limitations are optimizable as they control the optical density of the intermediate layers. As such, they are optimizable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the intermediate layers with the limitation of the concentration of carbon black since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Matsubara does not show the central intermediate layer (substrate) comprises PET, polyethylene naphthalate, or aramid film as in instant claim 6. Takahashi shows a light shielding blade comprising a plastic substrate such as PET (column 1, lines 51-52). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use PET or aramid film as a substrate for light shielding blades since it is known in the art of optical apparatuses to use such materials due to their lightness, rigidity, and durability.

Matsubara does not specifically show that its intermediate layer 7 excludes fibers as instant claim 1. Takahashi shows in column 1, lines 41-50 that light shielding blade materials include plastics such as polyethylene, polypropylene, or carbon fiber-reinforced materials of the same plastics. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the intermediate layer of Matsubara with a plastic which is not reinforced with fibers since the plastic without the fibers is an obvious equivalent to the fiber-reinforced plastic, absent any evidence to the contrary.

**Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsubara, U.S.

Pat. No. 5,202,715 in view of Takahashi et al., U.S. Pat. No. 6,001,465 in further view of Takuya, JP 09274218 (JP'218).

Matsubara and Takahashi are relied upon as above for claim 1. Matsubara shows a black lubricant coating may cover the laminate structure to improve light shielding and lubrication (column 4, liens 6-12). Matsubara does not show that the central intermediate layer (substrate) is stretched bidirectionally in primary and secondary directions orthogonal to each other as in instant claim 2.

JP '218 shows a light shieldable film for optical apparatus wherein the base film comprises a thermoplastic resin such as PET (Abstract). The PET film is preferably biaxially stretched. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a biaxially stretched substrate film in a light shielding blade in order to impart improved light shiedability and rigidity.

**Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsubara, U.S. Pat. No. 5,202,715 in view of Takahashi et al., U.S. Pat. No. 6,001,465 in further view of Takeshi et al., JP 101058417.

Matsubara and Takahashi are relied upon as above for claim 1. Matsubara does not show that the reinforcement fibers comprise polyparaphenylene benzobioxazole as in instant claim 5. Takeshi shows a prepreg formed from a thermosetting resin with poly-para-phenylbenzobisoxazole fiber reinforcements (Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use fibers of poly-para-

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phenylbenzobisoxazole in a light shielding film to impart rigid reinforcement to the film and to obtain a tough and impact-resistant prepreg.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly T. Nguyen whose telephone number is (703) 308-8176. The examiner can normally be reached on Monday to Friday, except on every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Kimberly T. Nguyen  
Examiner  
December 18, 2002

A handwritten signature in black ink, appearing to read "Cynthia H. Kelly".